8 GEAR BOX





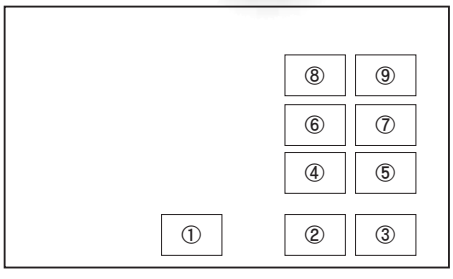


기어 박스 GEAR BOX

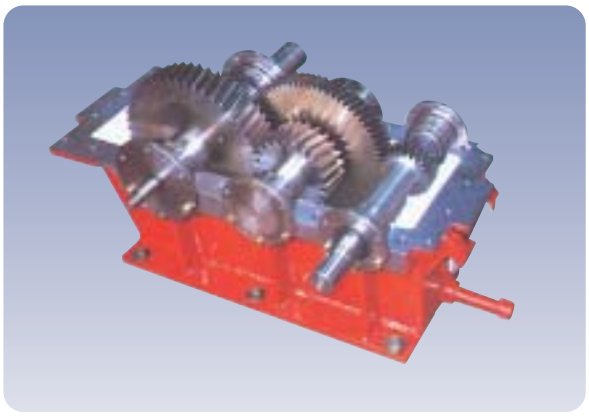
(주)삼양감속기는 산업 PLANT 분야에 자신있게 참여하여 설비에서 사후 관리까지 일관된 시스템을 지향하여 고객의 만족을 극대화 하겠습니다.

인류과학 역사상 동력전달의 최고효율인 기어전동기
(주)삼양감속기는 자체개발 및 신기술 개발을 통해
가장 강력한 동력전달을 요하는 기계화 및 성력화에
부응하고 있습니다.



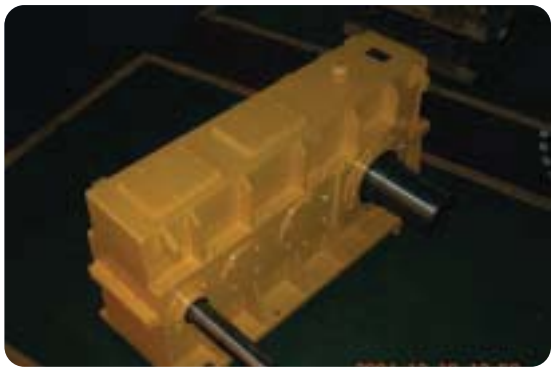


① INSIDE OF REDUCER
② BEVEL AND HELICAL REDUCER
③ 3RD STAGE HELICAL REDUCER
④ 수평형 2단 감속기
⑤ MAIN HOIST-CRANE
⑥ PINION STAND-MILL LINE
⑦ TRAVERSING-CRANE
⑧ PINION STAND-SLITTER LINE
⑨ 대형베벨감속기-MILL LINE

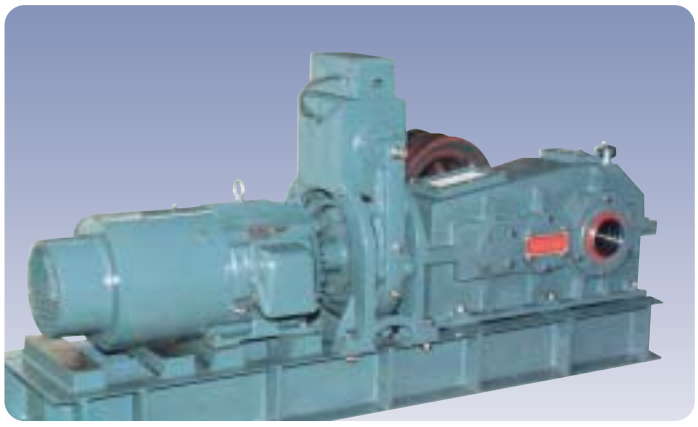
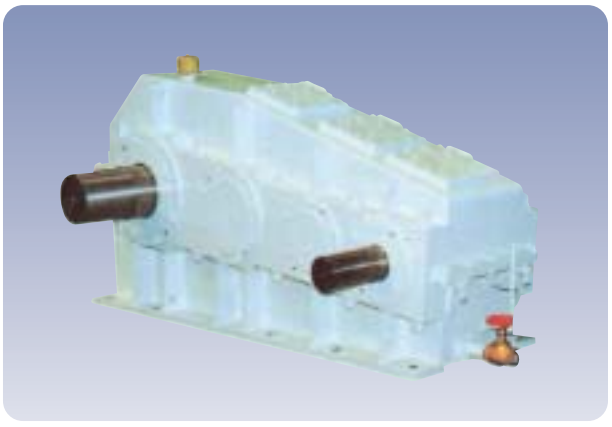






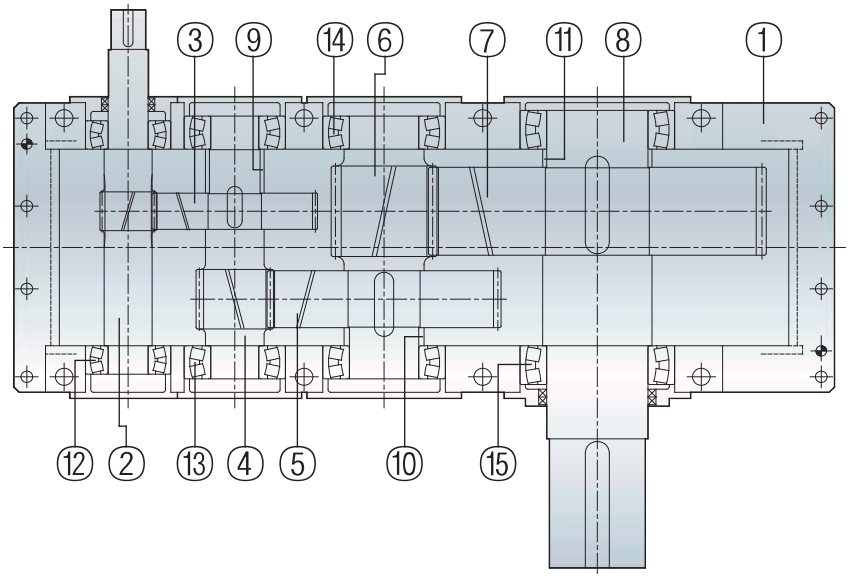



Gear Box

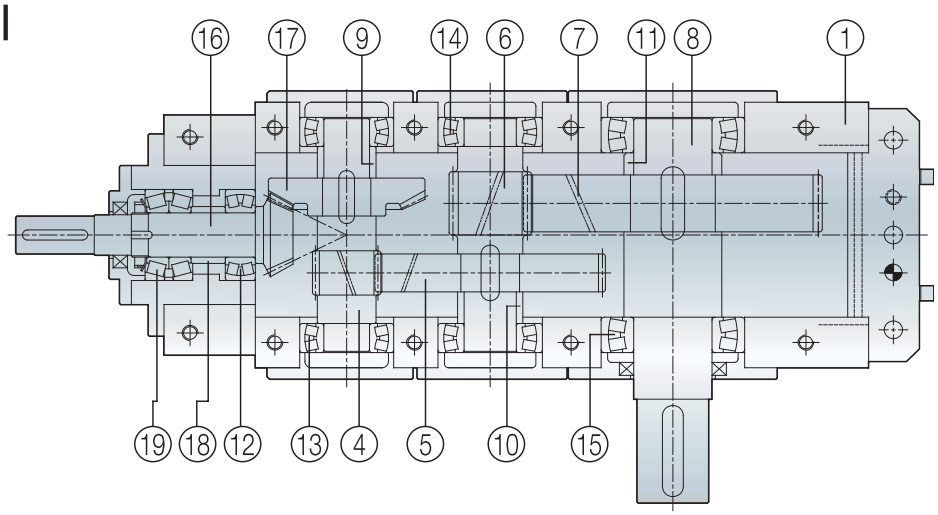



감속기 내부구조

평행축 감속기



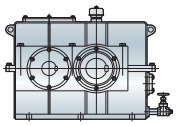
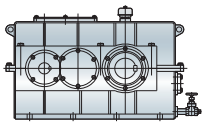
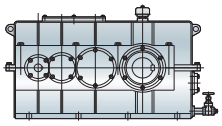
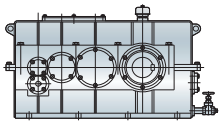
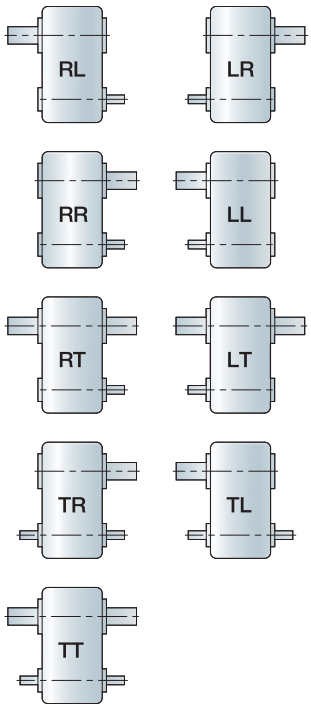
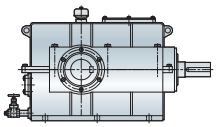
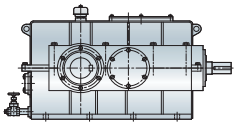
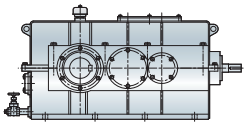
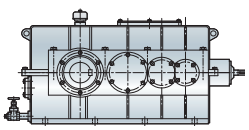
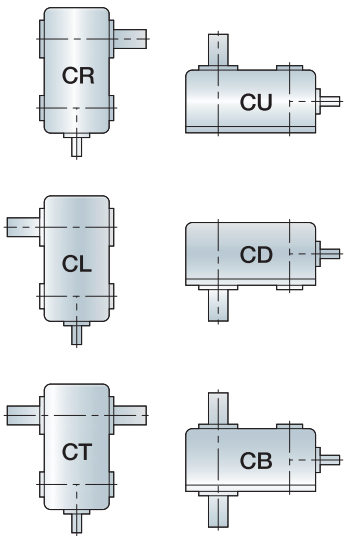
직교축 감속기



품 번	품 명	품 번	품 명	품 번	품 명	품 번	품 명
1	케이스	6	3단 피니언	11	칼라	16	1단 베벨 피니언
2	1단 피니언	7	3단 기어	12	자동조심 베어링	17	1단 베벨 기어
3	1단 기어	8	출력축	13	자동조심 베어링	18	칼라
4	2단 피니언	9	칼라	14	자동조심 베어링	19	테이퍼 롤러 베어링
5	2단 기어	10	칼라	15	자동조심 베어링		

호칭형식

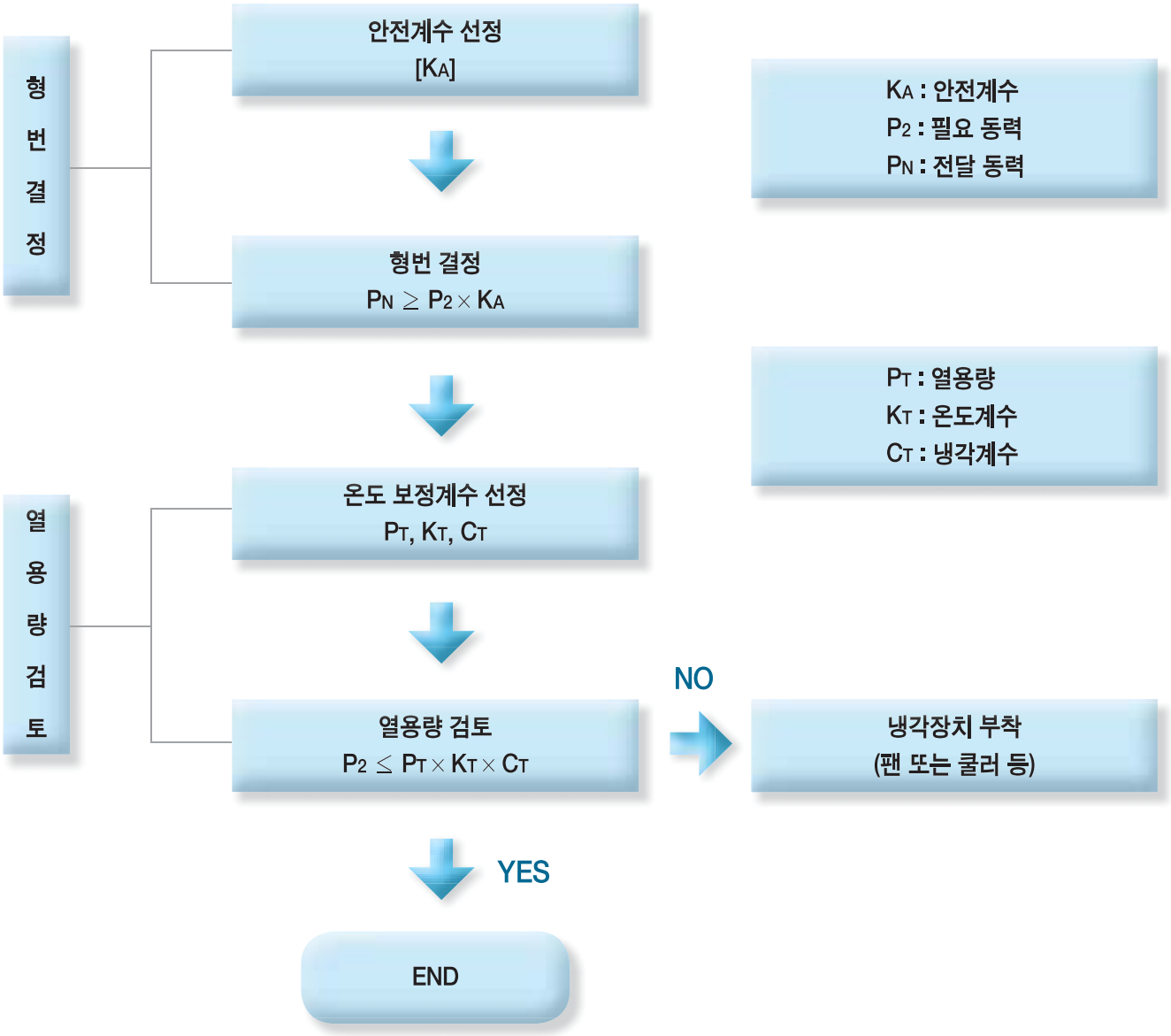
■ SY — 3H — 200 — RL — 50

형 식	형 번	형 번	축단 배치	감 속 비
평행축감속기	1단 : 1H  2단 : 2H  3단 : 3H  4단 : 4H 	100 125 140 160 180 200 225 250 280 320 360 400 450 500 560 630 710 800		1단 : 1.25 ~ 6.3 2단 : 6.3 ~ 22.4 3단 : 22.4 ~ 100 4단 : 100 ~ 500
직교축감속기	1단 : 1B  2단 : 2B  3단 : 3B  4단 : 4B 			1단 : 1 ~ 4 2단 : 4 ~ 18 3단 : 18 ~ 90 4단 : 90 ~ 500

GEAR BOX

선정방법

■ 감속기 선정 순서 및 방법



■ 온도 보정 계수

주변 온도	온도계수 [KT]
20	1.00
30	0.85
40	0.70
50	0.55

감속기 냉각 방식	냉각계수 [CT]
고속 축에 2개의 팬을 부착하여 냉각	2.50
고속 축에 1개의 팬을 부착하여 냉각 (직교축 감속기)	2.00
고속 축 모터 반대 방향에 1개의 팬을 부착하여 냉각	1.65
고속 축 모터 방향에 1개의 팬을 부착하여 냉각	1.25

■ 안전계수 [KA]

SF

구동 기계	사용시간 (hr/day) 10hrs	24hrs
AGITATORS / MIXERS		
Pure Liquids	1.00	1.25
Liquids and Solids	1.25	1.50
Liquids Variable Density	1.25	1.50
BLOWERS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Vane	1.25	1.50
BREWING AND DISTILLING		
Bottling Machinery	1.00	1.25
Brew Kettles-Continuous Duty	1.00	1.25
Cookers-Continuous Duty	1.00	1.25
Mash Tubs-Continuous Duty	1.00	1.25
Scale Hopper-Frequent Starts	1.25	1.50
CAN FILLING MACHINES	1.00	1.25
CAR DUMPERS	1.75	2.00
CAR PULLERS	1.25	1.50
CEMENT INDUSTRY		
Concrete Mixers	1.50	1.75
Breakers	1.25	1.50
Rotary Kilns	2.00	2.00
Tube Mills	2.00	2.00
Separators	1.75	1.75
Roll Crushers	2.00	2.00
CLARIFIERS	1.00	1.25
CLASSIFIERS	1.25	1.50
CLAY WORKING MACHINERY		
Brick Press	1.75	2.00
Briquette Machine	1.75	2.00
Pug Mill	1.25	1.50
COMPACTORS	2.00	2.00
COMPRESSORS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Reciprocating, Multi-Cylinder	1.50	1.75
Reciprocating, Single-Cylinder	1.75	2.00
CONVEYORS		
Apron	1.25	1.50
Belt	1.25	1.50
Bucket	1.25	1.50
Chain	1.25	1.50
Flight	1.25	1.50
Screw	1.25	1.50
Shaker	1.75	2.00
CRANES		
Hoisting		
Light Duty	1.25	1.25
Medium Duty	1.50	1.50
Heavy Duty	1.75	1.75
Traverse Motion & Travel Motion		

구동 기계	사용시간 (hr/day) 10hrs	24hrs
CRANE (cont)		
Light Duty	1.50	1.50
Medium Duty	1.75	1.75
Heavy Duty	2.00	2.00
Slewing Motion		
Light Duty	1.50	1.50
Medium Duty	1.75	1.75
Heavy Duty	2.00	2.00
Boom Hoisting		
Light Duty	1.00	1.00
Medium Duty	1.25	1.25
Heavy Duty	1.50	1.50
CRUSHER		
Stone or ore	1.75	2.00
DREDGES		
Cable Reels	1.25	1.50
Conveyors	1.25	1.50
Cutter Head Drivers	2.00	2.00
Pumps	2.00	2.00
Screen Drivers	1.75	2.00
Stackers	1.25	1.50
Winches	1.25	1.50
ELEVATORS		
Bucket	1.25	1.50
Centrifugal Discharge	1.00	1.25
Escalators	1.00	1.25
Freight	1.25	1.50
Gravity Discharge	1.00	1.25
EXTRUDERS		
General	1.50	1.50
Plastics		
Variable Speed Drive	1.50	1.50
Fixed Speed Drive	1.75	1.75
Rubber		
Continuous Screw Operation	1.75	1.75
Intermittent Screw Operation	1.75	1.75
FANS		
Centrifugal	1.00	1.25
Cooling Towers	2.00	2.00
Forced Draft	1.25	1.25
Induced Draft	1.50	1.50
Industrial & Mine	1.50	1.50
FEEDERS		
Apron	1.25	1.50
Belt	1.25	1.50
Disc	1.00	1.25
Reciprocating	1.75	2.00
Screw	1.25	1.50
FOOD INDUSTRY		
Cereal Cooker	1.00	1.25
Dough Mixer	1.25	1.50
Meat Grinders	1.25	1.50
Slicers	1.25	1.50
GENERATORS AND EXCITERS	1.00	1.25

■ 안전계수 [KA]

SF

구동 기계	사용시간 (hr/day) 10hrs	24hrs
HAMMER MILLS	1.75	2.00
LAUNDRY		
Tumblers	1.25	1.50
Washers	1.50	2.00
LUMBER INDUSTRY		
Barkers-Spindle Feed	1.25	1.50
Main Drive	1.75	1.75
Conveyors-Burner	1.25	1.50
Main or Heavy Duty	1.50	1.50
Main Log	1.75	2.00
Re-saw, Merry-Go-Round	1.25	1.50
Conveyors		
Slab	1.75	2.00
Transfer	1.25	1.50
Chains		
Floor	1.50	1.50
Green	1.50	1.75
Cut-Off Saws		
Chain	1.50	1.75
Drag	1.50	1.75
Debarking Drums	1.75	2.00
Feeds		
Edger	1.25	1.5
Gang	1.75	1.75
Trimmer	1.25	1.50
Log Deck	1.75	1.75
Log Hauls-Incline-Well Type	1.75	1.75
Log Turning Dev ices	1.75	1.75
Planer Feed	1.25	1.50
Planer Tilting Hoists	1.50	1.50
Rolls-Live-off brg.-Roll Cases	1.75	1.75
Sorting Table	1.25	1.50
Tipple Hoist	1.25	1.50
Transfers		
Chain	1.50	1.75
Craneway	1.50	1.75
Tray Drives	1.25	1.50
Veneer Lathe Drives	1.25	1.50
METAL MILLS		
Draw Bench Carriage & Main d.	1.25	1.50
Runout Table		
Non-reversing		
Group Drives	1.50	1.50
Individual Drives	2.00	2.00
Reversing	2.00	2.00
Slab Pushers	1.50	1.50
Shears	2.00	2.00
Wire Drawing	1.25	1.50
Wire Winding Machine	1.50	1.50
METAL STRIP PROCESSING M.		
Bridles	1.25	1.50
Coilers & Uncoilers	1.00	1.25
Edge Trimmers	1.25	1.50
Flatteners	1.25	1.50
Loopers (Accumulators)	1.00	1.25
Pinch Rolls	1.25	1.50
Scrap Choppers	1.25	1.50
Shears	2.00	2.00
Slitters	1.25	1.50

구동 기계	사용시간 (hr/day) 10hrs	24hrs
MILLS, ROTARY TYPE		
Ball & Rod		
Spur Ring Gear	2.00	2.00
Helical Ring Gear	1.50	1.50
Direct Connected	2.00	2.00
Dryers & Coolers	1.50	1.50
CONCRETE MIXERS	1.25	1.50
PAPER MACHINES		
Agitator (Mixer)	1.50	1.50
Agitator for Pure Liquors	1.25	1.25
Barking Drums	2.00	2.00
Barkers-Mechanical	2.00	2.00
Beater	1.50	1.50
Breaker Stack	1.25	1.25
Calender	1.75	1.75
Chipper	2.50	2.50
Chip Feeder	1.50	1.50
Coating Rolls	1.50	1.50
Conveyors		
Chip, Bark, Chemical	1.50	1.50
Log(including Slab)	2.00	2.00
Couch Rolls	1.50	1.50
Cutter	2.00	2.00
Cylinder Molds	1.50	1.50
Dryers		
Paper Machine	1.50	1.50
Conveyor Type	1.50	1.50
Embosser	1.50	1.50
Extruder	1.50	1.50
Fourdrinier Rolls (includes Lump breaker,dandy roll,wire turn..)	1.50	1.50
Jordan	1.50	1.50
Kiln Drive	1.50	1.50
Mt. Hope Roll	1.50	1.50
Paper Rolls	1.50	1.50
Platter	1.50	1.50
Presses-Felt & Suction	1.50	1.50
Pulpers		
Bales of recycling paper	2.50	2.50
Others	2.00	2.00
Pumps (Vacuum)		
Centrifugal	1.75	1.75
Waterring	1.75	1.75
Piston	2.00	2.00
Reelers	1.50	1.50
Screens		
Chip	1.50	1.50
Rotary	1.50	1.50
Vibrating	2.00	2.00
Size press	1.50	1.50
Super Calender	1.50	1.50
Thickener (AC Motor)	1.50	1.50
(DC Motor)	1.25	1.25
Washer (AC Motor)	1.50	1.50
(DC Motor)	1.25	1.25
Winders / Unwinders	1.50	1.50
Yankee Dryers	1.50	1.50
PULLERS - BARGE HAUL	1.25	1.50

■ 안전계수 [KA]

SF

구동 기계	사용시간 (hr/day) 10hrs	24hrs
PLASTICS INDUSTRY		
Primary Processing		
Intensive Internal Mixers		
Batch Mixers	1.75	1.75
Continuous Mixers	1.50	1.50
Batch Drop Mill-2 smooth rolls	1.25	1.25
Continuous Feed,Holding & Blend Mill	1.25	1.25
Compounding Mill	1.25	1.25
Calenders	1.50	1.50
Secondary Processing		
Blow Molders	1.50	1.50
Coating	1.25	1.25
Film	1.25	1.25
Pipe	1.25	1.25
Pre-Plasticizers	1.50	1.50
Rods	1.25	1.25
Sheet	1.25	1.25
Tubing	1.25	1.50
PUMPS		
Centrifugal	1.00	1.25
Proportioning	1.25	1.50
Reciprocating		
Single Acting, 3 or more Cyli.	1.25	1.50
Double Acting, 2 or more Cyli.	1.25	1.50
Rotary		
Gear Type	1.00	1.25
Lobe	1.00	1.25
Vane	1.00	1.25
RUBBER INDUSTRY		
Intensive Internal Mixers		
Batch Mixers	1.75	1.75
Continuous Mixers	1.50	1.50
Mixing Mill - 2 smooth rolls	1.50	1.50
Batch Drop Mill - 2 smooth rolls	1.50	1.50
Cracker Warmer - 2 rolls ; 1 corrugated roll	1.75	1.75
Cracker - 2 corrugated rolls	2.00	2.00
Holding, Feed & Blend Mill-2rolls	1.25	1.25
Refiner - 2 rolls	1.50	1.50
Calenders	1.50	1.50

구동 기계	사용시간 (hr/day) 10hrs	24hrs
SAND MULLER	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT		
Bar Screens	1.25	1.25
Chemical Feeders	1.25	1.25
Dewatering Screens	1.50	1.50
Scum Breakers	1.50	1.50
Slow or Rapid Mixers	1.50	1.50
Sludge Collectors	1.25	1.25
Thickeners	1.50	1.50
Vacuum Filters	1.50	1.50
SCREENS		
Air Washing	1.00	1.25
Rotary - Stone or Gravel	1.25	1.50
Traveling Water Intake	1.00	1.25
SUGAR INDUSTRY		
Beet Slicer	2.00	2.00
Cane Knives	1.50	1.50
Crushers	1.50	1.50
Mills (low speed end)	1.75	1.75
TEXTILE INDUSTRY		
Batchers	1.25	1.50
Calenders	1.25	1.50
Cards	1.25	1.50
Dry Cans	1.25	1.50
Dryers	1.25	1.50
Dyeing Machinery	1.25	1.50
Looms	1.25	1.50
Mangles	1.25	1.50
Nappers	1.25	1.50
Pads	1.25	1.50
Slashers	1.25	1.50
Soapers	1.25	1.50
Spinners	1.25	1.50
Tenter Frames	1.25	1.50
Washers	1.25	1.50
Winders	1.25	1.50

■ 사용시간과 하중에 따른 안전계수

원 동 력	사용시간	하중의 종류 균일하중 U	보통하중 M	충격하중 H
전 동 기	10hrs / day	1.00	1.25	1.75
	24hrs / day	1.25	1.50	2.00
내연기관 엔 진	10hrs / day	1.25	1.50	2.00
	24hrs / day	1.50	1.75	2.25